



# GENERATION, GENDER AND CIRCULAR CONSUMPTION: AN EXPLORATION OF THE BEHAVIOR OF URBAN INDIAN YOUTH

Anindita Roy Saha<sup>1</sup>, Garima Gupta<sup>2</sup>

<sup>1</sup> Professor, Department of Economics, Indraprastha College for Women, University of Delhi, Delhi, India

<sup>2</sup> Guest faculty (EVS), Department of Botany, Maitreyi College, University of Delhi, Delhi, India

## ABSTRACT

The global focus on circular economy transition is predominantly centred on manufacturing and business while the third crucial component of consumption is often ignored. Circular consumption provides the complementary looping actions through reducing consumption, reusing and purchasing recycled and refurbished products, adapting to new lifestyles, sharing product services, substituting to local products and so on. The present study explores the consumer behaviour of the urban Indian youth in light of the above and attempts to estimate their readiness for the circular economy transition. As a generation who will steer the journey to a sustainable future, their environmental attitude, purchase intention, social commitment etc. are important drivers of change. The study finds that the millennials and post-millennials of urban India form a homogenous cluster across age and gender groups and collectively reveal significant environmental awareness, pro-environmental behaviour, adaptation intention, willingness to pay and preparedness for change through circular consumption patterns.

**KEYWORDS:** Circular Economy, Consumption Behaviour, Product Cycle, Willingness to Pay, Environmental Awareness, Adaptiveness

## INTRODUCTION

The global drive for transition to circular economy (CE) has majorly focused on production, manufacturing and business. Among the stated principles of the 4 R's, greater emphasis has been laid on recycling and reusing of materials, while recovery and reduction are rather often ignored (Kirchher et al, 2017). Consumption, a major instrument for reduction, has not received enough attention in the practice and policy designs of CE, although sustainable production and consumption are simultaneous goals of sustainable development (SDG 12) that aim to achieve economic development, social equity and desired environmental quality (UN SDG Report, 2021). While technological advancement can bring in the desired components of circularity in production and business, the success of CE depends crucially on consumption behaviour, environmental consciousness and willingness of the people to move towards the said transformation. Circular consumption may be considered as a complement to circular manufacturing in charting the path of economic growth that can replace the linear model by a circular one in a world faced with resource scarcity and ecological limits.

### 1.1 Circular Consumption for Sustainability

Inclusion of the sustainability principle in consumption is aimed to arrest the adverse consequences of consumption activities on the environment by identifying the drivers of such forms of consumption and indicating actions that can reduce such impacts. The idea of circular consumption overlaps with sustainable consumption in the sense that the embedded ideas of circular and supporting actions like looping, regenerating, adapting, sharing, substitution, localization etc. are essentially

instruments for achieving sustainability (Williams, 2019). Consumption is a complex process with six stages involved in it, namely, acquisition, appropriation, appreciation, devaluation, divestment and disposal (Warde, 2005), (Camacho-Otero et al, 2018), (Evans, 2019). Circular consumption is a set of expected behaviors and activities that consumers are supposed to follow, within the framework of the above six stages of consumption in line with the 4Rs model and waste hierarchy (Kirchher et al, 2017), (Camacho-Otero et al, 2020). Circularity in consumption primarily manifests in the forms of reuse, recover and purchase of recycled and refurbished products and may incorporate circular behavioral aspects at different stages of consumption. For example, re-buy, rent, receive can change consumer behavior at the acquisition stage whereas retain, repair and remunerate may be the guiding principles for appropriation, appreciation, devaluation and divestment. Similarly, disposition may be modified towards circularity by practicing return, resell and relinquish (Camacho-Otero et al, 2018).

The consumption patterns of people are influenced by three main factors, namely, individual perspective, social structures and social practices. The individual perspective includes the economic, psychological and cultural factors facilitated by social structure including social institutions and influenced by prevailing social practices. While consumer behaviour is primarily governed by economic conditions and status, it is also guided by socio-material elements like ease of using a product, its impact on daily life etc. and socio-cultural elements like demography and psychology. These include age, gender, education, location etc. on one hand and attitude, experience, values, philosophy of life, level of attachment to materials etc.

on the other. The cultural elements attached with identity, type of social interaction, status in the social stratification structure, political consumerism etc. are also influencing factors for the same (Camacho-Otero et al, 2018), (Camacho-Otero et al, 2019), (Camacho-Otero et al, 2020). Adopting circular consumption practices for moving towards CE are dependent on such social and behavioural parameters as much as the basic economic factors like prices, availability, income and so on.

### 1.2 Urban Youth as Prime Consumers in Cities

A comprehensive policy planning for CE must include several aspects of cities and urban areas that are centres of major production and consumption activities. Currently, 55% of the world population resides in the urban areas and generate up to 80% of the global income. They account for 66% of the global energy consumption along with 70% of the global greenhouse gas emissions and 50% of the global waste generation. Cities are further expected to see a 66% increase in population by 2050 (World Bank, 2020).

Youth, a major segment of urban population, contribute significantly to the consumption and waste generation in cities through their lifestyle based on material consumption, travel, entertainment, online activities and so on. Therefore, young people may be identified as major stakeholders as well as drivers for change in shaping the future trajectory of CE. While the levels of their consumption have increased phenomenally compared to the previous generations, they have also been witnesses to several threats related to climate emergency and environmental degradation, particularly in the post-COVID world. The present generation of young consumers, blamed to have too much access to digital tools, exposure to social media, consciousness about global trends and excessive consumerism are also showing significant levels of environmental consciousness. Utilising the potential of youth may help create long term impacts on sustainability and change the economic life for environmental restoration. Developing countries like India can fruitfully utilize the demographic dividend in steering the transformation towards circularity through introducing and modifying circular consumption habits.

### 1.3 Generation and Gender Parameters for Youth

Consumption patterns of youth are reflections of their ascriptions of personal and outward obligations for environmental stewardship. The environmental awareness and purchase intentions of youth may be studied in terms of their happiness, frugality, environmental knowledge and environmental locus of control. The factors influencing their environmentally conscious consumer behaviour include environmental knowledge, perceived consumer effectiveness and environmental concern. Studies have shown that environmental behaviour of the younger millennials generally depend on environmental knowledge and concern. Environmental concerns are dominant factors and can play a strong mediating role between environmental knowledge and actual behaviour (Heo & Muralidharan, 2017).

The young minds may be significantly influenced by external contingencies, such as, pro-environment self-identity, environmental concern, campaigns, green stigma and so on.

The effects of digital literacy, e-loyalty, peer pressure, social media penetration and global citizenship attitude may be highly influencing factors behind the behaviour pattern of the young generations (Khan et al, 2021). While green purchase intentions and pro-environmental behaviour may be strongly correlated to self-identity and sense of stewardship, financial and health benefits have also been major factors behind consumption behaviour and pro-ecological practices (Dębski et al, 2020). The commitment for environment is often weighed against costs and prices too (Rincón et al, 2021). The behaviour of young consumers guided by environmental concern and economic considerations are indicators of current trends and future trajectories that are important for designing any transition.

While age is a widely used feature in analysing consumer behaviour across different clusters, social institutions like gender can be another important determining parameter. Studies have shown positive association between gender and sustainable consumption behaviour where women reveal higher levels of action both in overall behaviour and tendency to reuse products (Bulut et al, 2017). Environmental engagement of women is often tied to their economic status within the family framework. Gender gap has been prominent in pro-environmental behaviour observed in household-level environmental protection, with women engaging more frequently than men. However, it is often justified as a low hanging fruit because the actions at home such as, reusing packaging materials, are easier to practice (Kennedy and Kmec, 2017). Adding the gender dimension complements the enquiry into the environmental behaviour of young consumers in a developing society.

### 1.4 Aim of the Study

A study of the circular consumption patterns of the millennial and post-millennial generations of youth, namely, generation Y (born between 1981 and 1996) and Z (born between 1996 and 2012) may facilitate a deeper understanding of the changing behaviour patterns, if any and provide policy directions for the transition to CE. In the modern history, this is the first time five generations are working side-by-side, namely, generation Z, preceded by generation Y, generation X, baby boomers and the traditionalists. Generation Alpha (born after 2012) is in the making and is yet to be put as a cluster for any empirical study.

The present study is designed to evaluate the preparedness for transition to sustainable and circular consumption among the young consumers of urban India. In view of the announced objective of the Government of India to move towards CE, (GOI, 2019), a study on the purchase intentions and consumer behaviour of the Indian urban youth may provide valuable inputs in estimating the preparedness for CE and directions to fill the gaps. The young generations, Y and Z, have been selected as representatives of young India where more than half of the population is aged below 30. The study has been conducted in the National Capital Region (NCR) of Delhi which epitomizes urban lifestyle and houses a large size of young population. Along with the comparison of the two selected age clusters, attempts have also been made to investigate the relationship between gender and consumption behaviour in order to gain additional insights into the socio-

cultural dynamics of a developing society like India. There has not been much empirical study on sustainable and circular consumption patterns of the millennials and their successors in India, although there are some studies on pro-environmental behaviour in general. The study based on primary data aims to make significant contribution to the literature on consumer behaviour of India's urban youth, their environmentally motivated consumption patterns and preparedness for change to CE through circular consumption.

## 2. METHODOLOGY

### 2.1 Study Area and Sample

The Delhi NCR region has been selected as the study area primarily because of its large cosmopolitan nature that signifies modern India. The densely populated capital city accommodates around 16 million people which is 1.39 % of the total population in 0.05 % of the total geographical area of the country (Census 2011). It attracts people for various facilities related to political, economic, educational and health sectors. There is a growing number of students and young professionals who come to the NCR for purposes of study and/or employment from all parts of India. Therefore, the young people residing here may be considered as representative of the entire country's urban youth.

The sample consists of the people from Generation-Y (Gen-Y) or millennials and Generation-Z (Gen-Z) or post-millennials, consisting of students from colleges and universities and young professionals. The respondents belong to the age group that signifies India's demographic dividend reflected by the median age of 27 years, constituting 62.5% share of the age group 15-59 years that is likely to peak around 2041 (PIB, 2019). These generations are expected to show pro-environmental behaviour as they live at the times of environmental crisis. Moreover, they have undergone compulsory environmental education following the ruling of the Supreme Court of India in 2002 (Mohapatra & Raval, 2018) (Choudhary, Saha, & Tiwary, 2020). The other demographic feature for assessment, namely, gender, is subsumed in the same sample.

### 2.2 Survey and Analysis

The questionnaire for the primary survey was designed to examine the practice and preparedness of the young consumers for circular consumption through four chosen parameters, namely, their circular economy awareness, product cycle awareness, adaptiveness to eco-friendly measures and willingness to pay for the same. The objectives were to explore their levels of awareness and understanding about CE, life-cycle of virgin and recycled products, their impact on the natural systems, consumption behaviour, the extent of readiness to new technological options, and finally the willingness to pay for eco-friendly products, refurbished/remanufactured products made up of reused/recovered materials, as well as for projects to rejuvenate the urban ecosystem. Beyond basic knowledge, they were assessed on contemporary issues like waste management, use of solar energy, rainwater harvesting, e-vehicles, construction materials etc. that are outcomes of industrial manufacturing and technological solutions related to the CE transition.

The population of Delhi in the age group of 20-40 years is about 61,86,329 which is 37 % of the total population of Delhi (GNCTD, 2019). Therefore, a representative sample size of 500 was set to ensure a confidence level of 95 % with a 4% margin of error. A simple random sampling was conducted and a two-proportion z-test was used to analyze the information for each group to test the statistical significance of the proportion of the responses from the different groups according to age and gender with statistical significance set up at level 5 % and  $p < 0.05$ .

## 3. RESULTS

A total of 502 responses were recorded from the random sample with 249 and 253 responses from Gen-Y and Gen-Z respectively. According to the gender-based classification, 289 respondents were females and 213 were males. The share of male respondents in Gen-Y was 65% and that in Gen-Z was 80%, leaving 35% and 20% shares for women accordingly. Among the male respondents, 76% were from Gen-Y and 24% were from Gen-Z, while the corresponding shares among female respondents were 70% and 30% respectively.

Another classification was recorded in terms of the shares of students and young professionals as 68% and 32% respectively. Among the students, 38% were from Gen-Y and 62% were from Gen-Z, while among the professionals, 84% were from Gen-Y and 16% were from Gen-Z. The shares of females and males among students were 65% and 35% respectively whereas the corresponding shares were 42% and 58% among the young professionals.

The overlaps in age and professional status may be explained by the fact that there are students of comparatively higher age in research and other higher education sectors in certain disciplines whereas there are fresh pass outs like graduate engineers who get absorbed in jobs at a comparatively younger age. However, the gender distribution across age groups and professional status was totally random.

### 3.1 Age Based Pattern of Responses

#### 3.1.1 Circular Economy Awareness

The respondents were examined about their basic knowledge about the concept of CE, its guiding principles, implications of products made up of reused/ recycled materials, refurbished products and so on. Majority of them (63% of Gen-Y and 78% of Gen-Z) were familiar with the concept of CE although only 9% and 10% of the respondents respectively were aware of the difference between natural and economic cycles as the guiding principle of CE. Young people from both age groups responded positively for buying products made up of reused/ recycled materials and refurbished products primarily because these are economically cheaper. Only a third of the population (34% of Gen-Y and 23% of Gen-Z) gave greater weightage to the feature that such products are eco-friendly. Moreover, there is a common apprehension about quality risk leading to financial risk involved in buying these recycled/reused/refurbished products.

### 3.1.2 Product Cycle Awareness

Online shopping, packaging and disposal, waste generation and management were some of the central issues in examining the awareness about product cycles. Online shopping turned out to be a popular practice for more than 90% of both generations. Almost half the population in both age groups stated their habits of reusing the packaging material as a protective measure for the rising plastic menace. The respondents cited the major environmental problems of improper solid waste management as occupying physical space (23% of Gen-Y and 21% of Gen-Z), occupational and health hazards (19% and 13%) and air pollution (11% and 9%). It was encouraging to find that 96% of them across groups were aware of the energy generating potential of waste. Respondents from Gen-Y (86%) were more aware of eco-friendly alternatives of construction materials and energy efficient buildings than Gen-Z (74%).

### 3.1.3 Adaptiveness to Environment-Friendly Measures

This section focused on the attitude of the young generation towards new energy-environment-technology solutions for sustainability, such as, solar energy, rainwater harvesting systems, e-vehicles etc. While there was a uniformity in most responses of both groups in favour of compulsory rainwater harvesting, there was variation regarding the solar energy systems. 73% of Gen-Y and 54% of Gen-Z feel that solar energy systems are viable solutions for meeting the energy demand. Majority of the respondents (about 77% from both generations) believe that urban greening is important for beautification and pollution control purposes. The government initiative for e-vehicles was felt to be an eco-friendly option by most of the respondents (85-90% of both generations). However, 70% of Gen-Y and only 38% of Gen-Z were aware of the take-back scheme and recycling methods for the batteries of these e-vehicles.

Approximately 95% of both groups were ready to change their lifestyle and consumption behavior in order to reduce energy consumption. Around 95% were convinced to promote the local products. The current practice of online teaching-learning was perceived to be environmentally friendly by almost 60-70% of the respondents. The opinion regarding over utilization of resources, waste generation and environmental pollution in the hospitality, travel and tourism sectors was almost uniform across the two age groups.

### 3.1.4 Willingness to Pay

Concepts, knowledge and awareness finally translate into purchase intention and willingness to pay for environmentally friendlier options, even if it is a little higher. Almost 82% respondents of the two groups were ready to pay extra for recycled/refurbished products, 88-91% for energy efficient electronic appliances, 82-88% respondents for e-vehicles and about 80% were ready to pay more for eco-friendly construction materials. Most of the respondents (87%) were willing to pay or contribute their part for ecosystem revival projects. However, the extent of extra payment for environment-friendly products was limited to 10% extra, followed by some up to 25% extra (Figure 1). The willingness to pay for eco-friendly, green, recycled and refurbished products was marginally higher for

Gen-Y.

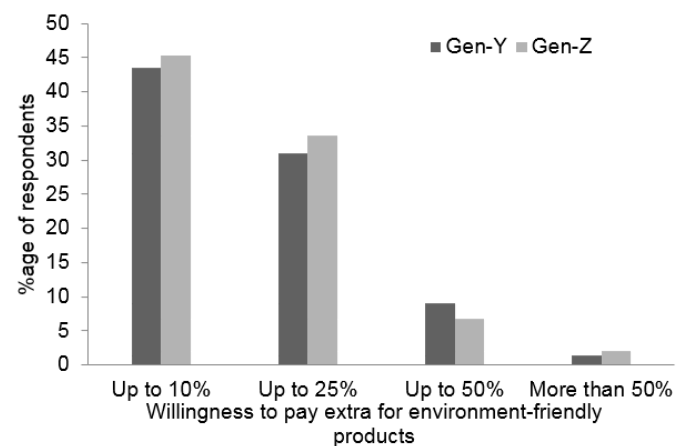


Figure 1: Variation Between Gen-Y and Gen-Z in Willingness to Pay

### 3.1.5 Analysis of Age-Based Response

A scrutiny of the responses reveals no significant difference between the two age groups. The overall performance scores obtained by the respondents of the two groups in each of the four categories are almost uniform (Figure 2). However, the share of positive responses for willingness to pay is higher than the other three categories

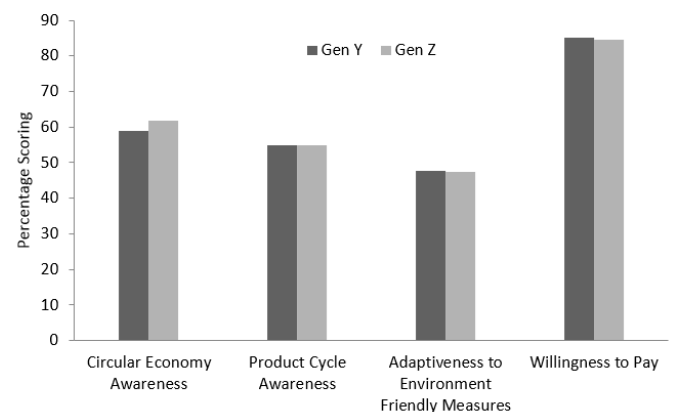


Figure 2: Percentage scoring of the age clusters for four criteria

There was no significant difference between Gen-Y and Gen-Z in the four chosen criteria, namely, circular economy awareness ( $z = -0.22$ ,  $p = 0.84$ ), product cycle awareness ( $z = 0.10$ ,  $p = 0.93$ ), adaptiveness to environment-friendly measures ( $z = 0.20$ ,  $p = 0.84$ ) and willingness to pay ( $z = 0.22$ ,  $p = 0.83$ ).

Although there was a broad similarity in the overall responses of Gen-Y and Gen-Z, there were variations with respect to a few specific questions. Regarding familiarity with the concept of CE, respondents of the two groups showed significant difference ( $z = -3.65$ ,  $p = 0.003$ ). In response to the question on e-vehicles, most of the respondents agreed that it is being introduced by the government as an eco-friendly option. However, there was a significant difference ( $z = 3.57$ ,  $p = 0.001$ ) regarding the awareness about any take-back scheme and battery recycling method. The responses regarding the potential



of solar energy in fulfilling domestic energy demand varied too ( $z = 2.06$ ,  $p = 0.04$ ). While most respondents voted for public transport as the preferred mode (67% Gen-Y and 56% Gen-Z), preference for the private mode of transport (12% of Gen-Y and 30% of Gen-Z) recorded a variation ( $z = -2.85$ ,  $p = 0.004$ ). 17% of Gen-Y and 10% of Gen-Z opted for car-pool/cab-sharing and 4% of both opted for individual hired cab. The reason cited for the above was majorly saving money whereas around 30% of the young respondents in both groups stated the environmental concern.

On the whole, Gen-Y has shown marginally greater awareness about CE and certain technological options like solar power, e-vehicle etc., while Gen-Z has revealed better knowledge about concepts and definitions. Both clusters have shown strong concerns about energy efficiency, eco-friendly construction materials, waste management, energy efficiency, urban greening and changing lifestyle.

### 3.2 Gender Based Pattern of Responses

#### 3.2.1 Circular Economy Awareness

The awareness about CE was found to be greater among females (73%) than males (68%). Although most of them gave positive answers for familiarity and definitions of CE, (88% female and 78% male), a mere 10% from each group knew that the guiding principle for CE is natural. 93% females and 98% males were aware of the recycled/refurbished products. Around 60-65% respondents from the two groups revealed preference for purchasing reused/refurbished products, the reasons being its eco-friendly nature as well as cheaper price. Around 28% respondents cited the environmental concern as the sole reason.

#### 3.2.2 Product Cycle Awareness

No major variation was observed along the gender line in terms of online shopping practices (97% females and 92% males). Interestingly, the share of men reusing the packaging material was higher (54%) than women (49%). This is surely in contrast with the pre-conceived societal notion about women's role and behaviour in the domestic sphere. Around 55% females and 48% males were concerned about the significant environmental threat due to non-biodegradability of solid waste. A significantly lower percentage of men and women considered problems of occupying physical spaces (21% females and 24% males), occupational and health hazards (15% females and 17% males) and air pollution (9% females and 11% males). A large section across gender seemed to be aware of waste as a source of energy (96% females and 97% males), eco-friendly alternatives for construction materials (75% females and 87% males) and energy-efficient buildings (80% females and 85% males).

#### 3.2.3 Adaptiveness to Environment-Friendly Measures

A larger number of respondents favoured compulsory rainwater harvesting (93% females and 91% males) than those favouring solar energy systems (59% females and 69% males). Both groups of respondents were aware of the eco-friendly nature of e-vehicles (90% females and 87% males), although information about the take-back scheme and battery recycling methods was available more with men (40% females and 74% males). This may also be explained by the existing societal norm of

men having greater technical orientation than their female counterparts.

The share of people ready for lifestyle changes were high across categories (95% females and 94% males). Online education was considered as an environmentally preferred option by 72% females and 61% males. Around 68% females and 61% males encouraged the promotion of local products for cheaper prices and lower emissions involved in transporting those goods. There are mixed opinions about the impacts of hospitality, travel and tourism sector, with almost no variation among the opinions of men and women regarding over utilization of resources, waste generation and environmental pollution.

#### 3.2.4 Willingness to Pay

Women have shown marginally greater willingness towards environmental restoration (88% females and 86% males), paying extra to purchase recycled/refurbished goods (85% of females and 79% males), energy efficient appliances (85% females and 84% males), e-vehicles (85% females and 84% males) and eco-friendly construction materials (almost 80% of both). However, the extent of extra payment was limited to 10% in most cases, and 25% in some (Figure 3).

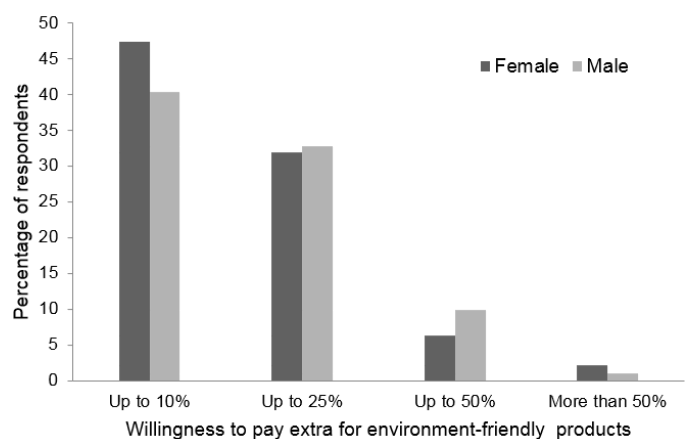


Figure 3: Gender-based variation in willingness to pay

#### 3.2.5 Analysis of Gender-Based Response

Although the overall responses for the first three parameters did not show any significant variation among the male and female respondents, there were minor variations in the last one with larger shares of positive responses for willingness to pay.

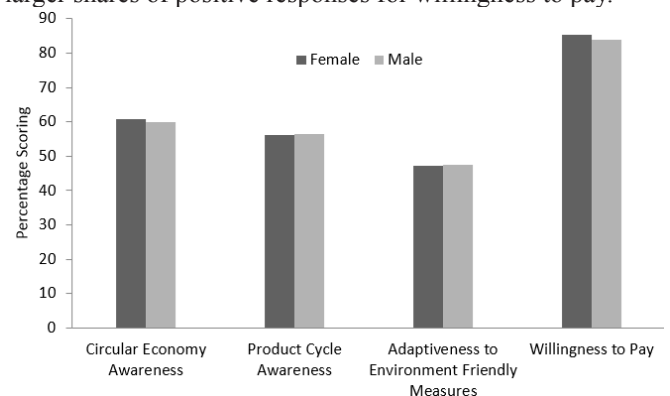


Figure 4: Percentage scoring of the gender groups for four criteria

The two gender groups have recorded almost no variation in the four selected parameters of measurement, namely, circular economy awareness ( $z = -1.83$ ,  $p = 0.07$ ), product cycle awareness ( $z = -1.96$ ,  $p = 0.05$ ) and adaptiveness to environment-friendly measures ( $z = -1.78$ ,  $p = 0.08$ ) respectively. Variation was minor in the willingness to pay ( $z = -2.35$ ,  $p = 0.02$ ).

Despite the overall similarities, minor variations were observed across responses within categories. While men and women have somewhat similar awareness about CE ( $z = -1.73$ ,  $p = 0.08$ ), the variation in response regarding recycled/refurbished products was significant ( $z = -3.16$  and  $p = 0.01$ ). Similarly, variations were observed in responses related to waste as a source of energy ( $z = -2.81$  and  $p = 0.005$ ), eco-friendly alternatives for construction materials ( $z = -3.53$ ,  $p = 0.0004$ ), energy efficient buildings ( $z = -2.89$ ,  $p = 0.004$ ) and environmental benefits of e-vehicle ( $z = -2.25$ ,  $p = 0.03$ ). However, only 40% female were aware of the take-back scheme and battery recycling methods, whereas the corresponding figure for men is 74%, revealing a huge variation ( $z = -5.53$ ,  $p = 0.00001$ ).

There is a variation in response in the perception of solar energy system as a feasible solution ( $z = -3.04$ ,  $p = 0.003$ ). While the responses over rainwater harvesting showed moderate variation ( $z = -2.51$ ,  $p = 0.012$ ), that for transportation showed significant variation ( $z = -3.75$ ,  $p = 0.0002$ ). 54% females and 71% males opted for the public mode of transport, whereas 27% female and 13% male voted for private transport, 6% female and 12% male voted for car-pool/cab sharing and 14% female and 3% male voted for individual hired cabs. This clearly shows a greater environmental consciousness among women who in larger numbers (32% female and 25% males) have expressed greenhouse gas emissions as the dominant reason for such preference. However, many (45% females and 56% males) have admitted that the main advantage of car-pooling/car sharing is saving money ( $z = -2.96$ ,  $p = 0.003$ ). The responses show variation for the responses over the willingness to pay extra for the recycled/refurbished goods ( $z = -2.00$ ,  $p = 0.05$ ), for energy efficient appliances ( $z = -2.6$ ,  $p = 0.006$ ) and for e-vehicles ( $z = -2.35$ ,  $p = 0.02$ ).

Women have revealed marginally higher sensitivity in issues that relate more to practices of daily life. Men have shown greater awareness about product cycles and technologies and women in basic knowledge and practices, and willingness to pay for environmental concerns. On the whole, the gender gap in responses is minimal.

#### 4. SUMMARY AND DISCUSSION

Information pertaining to the consumer behaviour of youth is relevant to community, educational institutions, government agencies as well as industries in order to engage the youth in sustainable development (Severo et al, 2019). The present study was an attempt to generate information about the Indian urban youth through the lens of their consumption intention, knowledge and commitment for sustainability, environmental stewardship, willingness to pay for eco-friendly products and practices.

The results show that the urban youth in India across age groups and gender categories show somewhat similar consumption patterns, environmental concerns and readiness to change lifestyle for a sustainable future. They have revealed a moderate attitude towards circular consumption with a mixed response on reducing and reusing consumption and promoting the use of refurbished products on one hand, and moving towards sustainable energy, transport, life style etc. on the other. Gen-Y and Gen-Z are marginally different in terms of their basic knowledge, environmental concerns and eco-friendly behaviours. The millennials have shown somewhat greater awareness about practical issues while the post-millennials have more theoretical knowledge. Similarly, men and women have shown comparable traits with some difference in the female attitude tilted towards environmental knowledge and daily practices and male attitudes towards greater technological details. On the whole, urban Indian youth may be considered as a homogenous cluster for all practical purposes.

The circular consumption patterns of the urban Indian youth show a positive trend for environmental concern, adaptation intentions, purchase preference for recycled products, sharing of transport, waste disposal practices and so on. They have adequate knowledge about the current environmental issues and are willing to work for change. The youth in urban India have stated clear preference for solar power, rainwater harvesting, switch to e-vehicles, energy conservation and related technological options. They favour local products that will reduce the transportation need and resultant ambient pollution. Digitization in all activities, from online shopping to education, are preferred by them. Travel, tourism and hospitality are considered skeptically as sources of pollution, resource depletion and waste generation. These observations reveal a strong environmental concern and intention for adaptability to circular consumption practices.

The Indian millennials and post-millennials have showed behavioural patterns comparable with their counterparts in other countries. For example, Malaysian millennials have been found to be guided by environmental awareness to pay for green consumptions and Turkish undergraduate students have a larger number of true-greens than reluctant greens and non-greens (Gan and Seo, 2018), (Coskun and YetkinOzbuk, 2019). Sustainable consumer behaviour of Indonesian youth in the 17-27 age groups has been highly influenced by environmental concern, self-efficacy and subjective knowledge and not so much by consumer guilt (Rizkalla and Erhan, 2020). The urban young consumers of India have been found to be governed by similar psychological, social and environmental attitudes.

The results of the study show that the Indian youth consider product attributes and quality risk while making purchase choices. This is in sync with the Chinese generation Z that has shown a purchase behaviour mediated by product attributes and perceived consumer effectiveness which intermediate green purchase and environmental awareness positively (Song et al, 2020). Cost of products and speculation on prices are often significant determining factors behind behaviour patterns than the commitment for leaving resources for the future (Rincón

et al, 2021). The considerations of price, cost and potential financial benefits have been important considerations for the young men and women in modern India. For example, the preference for shared transport, local product, online shopping etc. have been primarily guided by cheaper prices and their willingness to pay for circular products is limited to a maximum of 25% extra for some and 10% for the majority.

Since price, supply and quality seem to play a significant role behind circular consumption behaviour of youth, due care is to be taken during circular production for consumer assurance. This further requires regulations for standards of refurbished and recycled goods, certainty of demand and supply chain, efficient marketing strategies and technical capabilities. Moreover, adequate caution is required to ensure that the complexity of circular consumption does not lead to unintended consequences for the environment (Cooper & Gutowski, 2015) while adapting new technology, substituting by local products and optimising economic activities through reduction, reuse, regeneration and recovery. The perceived high-risk and low-quality issues, performance doubts, lack of understanding and knowledge of refurbished goods are some of the hindrances that concern the consumer. Investigation into behavioral factors and consumer perceptions provide insights to firms for designing future production plans (Weelden, Mugge, & Bakker, 2016). The present exploration of the circular consumption behaviour of urban youth is one step towards assessing the future direction and charting the trajectory for a sustainable and circular future for India.

## 5. ACKNOWLEDGMENT

The study was carried out as a master's level dissertation of Ms. Garima Gupta under the supervision of Prof. Anindita Roy Saha at the Department of Environmental Studies, University of Delhi, Delhi, India in the year 2021. Authors thank Dr. Nawin K. Tiwary for his assistance in data analysis and visualization. Authors thank all the respondents for their cooperation, sincere inputs, and consent.

## REFERENCES

1. Bulut, Z. A., Çimrin, F. K., & Doğan, O. (2017, November). Gender, generation and sustainable consumption: Exploring the behaviour of consumers from Izmir, Turkey. *International Journal of Consumer Studies*, 6, 597-604. <https://doi.org/10.1111/ijcs.12371>
2. Camacho-Otero, J., Boks, C., & Pettersen, I. N. (2018). Consumption in the Circular Economy: A Literature Review. *Sustainability*, 10(8), 2758. <https://doi.org/10.3390/su10082758>
3. Camacho-Otero, J., Boks, C., & Pettersen, I. (2019). User acceptance and adoption of circular offerings in the fashion sector: insights from user-generated online reviews. *Journal of Cleaner Production*, 231, 928-939. <https://doi.org/10.1016/j.jclepro.2019.05.162>
4. Camacho-Otero, J., Tunn, V. S., Chamberlin, L., & Boks, C. (2020). Consumers in the circular economy. In M. Brand-Å, D. Lazarevic, & G. Finnveden, *Handbook of the Circular Economy* (pp. 74-87). Edward Elgar Publishing.
5. Census. (2011). Office of the Registrar General & Census Commissioner, India. Retrieved May 2021, from Delhi Metropolitan Population 2011 - 2021: <https://www.census2011.co.in/census/metropolitan/50-delhi.html>
6. Census. (2011). Office of the Registrar General & Census Commissioner, India. Retrieved May 2021, from Census of India: <https://censusindia.gov.in/2011census/migration.html>
7. Choudhary, S., Saha, A. R., & Tiwary, N. (2020). The role of compulsory environmental education in higher learning: A study in the University of Delhi. *APPLIED ENVIRONMENTAL EDUCATION & COMMUNICATION*, 19(4), 389-401. DOI:10.1080/1533015X.2019.1605946 <https://doi.org/10.1111/jiec.12388>
8. Cooper, D., & Gutowski, T. (2015). The Environmental Impacts of Reuse: A Review. *Journal of Industrial Ecology*, 21(1), 38-56. <https://doi.org/10.1111/jiec.12388>
9. Coşkun, A., & Yetkin Özbük, R. (2019). Environmental segmentation: young millennials' profile in an emerging economy. *Young Consumers*, 20(4), 359-379. <https://doi.org/10.1108/YC-12-2018-0912>
10. Dębski, M., & Borkowska-Niszczota, M. (2020). Consumer ecological behaviour and attitudes towards pro-ecological activities in accommodation facilities by generation Z. *Tourism*, 30(2), 43-50. DOI:10.18778/0867-5856.30.2.20
11. Evans, D. M. (2019). What is consumption, where has it been going, and does it still matter? *The Sociological Review*, 67(3), 499-517. <https://doi.org/10.1177/0038026118764028>
12. Gan, J., & Seo, N. (2018). Millennials' environmental awareness, price sensitivity and willingness to pay for Green Hotels. *Journal of Tourism, Hospitality & Culinary Arts*, 10(2), 47-62. <https://fhtm.uitm.edu.my/.../Chap-5.pdf>
13. Girard, L. F., & Nocca, F. (2019). Moving Towards the Circular Economy/City Model: Which Tools for Operationalizing This Model? *Sustainability*, 11(22). <https://doi.org/10.3390/su11226253>
14. GNCTD. (2019). Economic Survey of Delhi. New Delhi: Planning Department, Government of NCT of Ddelhi. <http://delhiplanning.nic.in/content/economic-survey-delhi-2020-21-english>
15. GoI. (2017). Strategy Paper on Resource Efficiency. New Delhi: NITI Aayog. [http://niti.gov.in/writereaddata/files/document\\_publication/Strategy%20Paper%20on%20Resource%20Efficiency.pdf](http://niti.gov.in/writereaddata/files/document_publication/Strategy%20Paper%20on%20Resource%20Efficiency.pdf)
16. Heo, J., & Muralidharan, S. (2017). What triggers young Millennials to purchase eco-friendly products?: the interrelationships among knowledge, perceived consumer effectiveness, and environmental concern. *Journal of Marketing Communications*, 25(4), 421-437. <https://doi.org/10.1080/13527266.2017.1303623>
17. Karthik, P. (2020, May). As India rebuilds its economy, it is time to make it circular and sustainable. Retrieved May 2021, from ORF: <https://www.orfonline.org/expert-speak/india-rebuilds-economy-time-make-circular-sustainable/>
18. Kennedy, E. H., & Kmec, J. (2018). Reinterpreting the gender gap in household pro-environmental behaviour. *Journal of environmental sociology*, 4(3), 299-310. <https://doi.org/10.1080/23251042.2018.1436891>
19. Khan, S. J., Chauhan, C., & Ul Akram, M. (2020). Cognitive factors influencing green consumption behaviour of young millennials: an empirical check on Indian consumers. *International Journal of Green Economics*, 14(4). <https://doi.org/10.1504/IJGE.2020.112566>
20. Kirchherr, J., Reike, D., & Hekkert, M. (2017). Conceptualizing the Circular Economy: An Analysis of 114 definitions. *Resources, Conservation and Recycling*, 127, 221-232. <https://doi.org/10.1016/j.resconrec.2017.09.005>
21. Mohapatra, P. K., & Raval, M. K. (2018). Environmental Education: The Indian Context. *Proceeding of International Conference on Industrial Impacts on Environment and Sustainable Development*. Keonjhar: Government College

- of Engineering, Odisha, India. [https://www.researchgate.net/publication/324748328\\_Environmental\\_Education\\_The\\_Indian\\_Context](https://www.researchgate.net/publication/324748328_Environmental_Education_The_Indian_Context)
22. PIB. (2019, July 4). India's Demography at 2040 : Planning Public Good Provision for the 21st Century. Retrieved May 2021, from Press Information Bureau: <https://pib.gov.in/PressReleaseDetail.aspx?PRID=1577022>
  23. Rincón, A. G., Barbosa, R. L., Álamo, E. M.-C., & Rodríguez-Cánovas, B. (2021). Sustainable Consumption Behaviour in Colombia: An Exploratory Analysis. *Sustainability*, 13(2), 802. <https://doi.org/10.3390/su13020802>
  24. Rizkalla, N., & Erhan, T. P. (2020). Sustainable Consumption Behaviour in The Context of Millennials in Indonesia – Can Environmental Concern, Self-efficacy, Guilt and Subjective Knowledge Make a Difference? *Management: Journal of Sustainable Business and Management Solutions in Emerging Economies*, 25(3), 43-54. DOI:10.7595/management.fon.2020.0001
  25. Severo, E. A., Ferro de Guimarães, J. C., Dellarmelin, M. L., & Ribeiro, R. P. (2019). The Influence of Social Networks on Environmental Awareness and the Social Responsibility of Generations. *BBR, Brazilian Business Review*, 16(5), 500-518. <https://doi.org/10.15728/bbr.2019.16.5.5>
  26. Singh, S. (2020, November). Solid Waste Management in Urban India: Imperatives for Improvement. Retrieved May 2021, from ORF: <https://www.orfonline.org/research/solid-waste-management-in-urban-india-imperatives-for-improvement-77129/#sdendnote18sym>
  27. Song, Y., Qin, Z., & Qin, Z. (2020). Green Marketing to Gen Z Consumers in China: Examining the Mediating Factors of an Eco-Label-Informed Purchase. *Sage Open*, 10(4). <https://doi.org/10.1177/2158244020963573>
  28. UN SDG Report. (2021). The Sustainable Development Goals Report. United Nations. <https://unstats.un.org/sdgs/report/2021/The-Sustainable-Development-Goals-Report-2021.pdf>
  29. UNCTAD. (2020). United Nations UNCTAD. Retrieved MAY 30, 2021, from 2020 e-Handbook of Statistics : <https://stats.unctad.org/handbook/Population/Total.html>
  30. Warde, A. (2005). Consumption and Theories of Practice. *Journal of Consumer Culture*, 5(2), 131-153. <https://doi.org/10.1177/1469540505053090>
  31. Weelden, E., Mugge, R., & Bakker, C. (2016). PAVING THE WAY TOWARDS CIRCULAR CONSUMPTION: EXPLORING CONSUMER ACCEPTANCE OF REFURBISHED MOBILE PHONES IN THE DUTCH MARKET. *Journal of Cleaner Production*, 113, 743-754. <https://doi.org/10.1016/j.jclepro.2015.11.065>
  32. Williams, J. (2019). Circular Cities. *Urban Studies*, 56(13), 2746-2762. <https://doi.org/10.1177/0042098018806133>
  33. World Bank. (2020, April 20). World Bank. Retrieved February 17, 2021, from The World Bank: <https://www.worldbank.org/en/topic/urbandevelopment/overview>